

## SPECIFICATION AMENDMENT

### IN THE SPECIFICATION

1. Please replace paragraph [0038] with the following amended paragraph:

[0038] Scrubber stages three and four operate much the same as scrubber stage two, and the following work in the same manner as described for the scrubber stage two counterparts: scrubber stage three liquid distributors 300, scrubber stage four liquid distributors 400, scrubber stage two liquid distributor header 205, scrubber stage three liquid distributor header 305, scrubber stage four liquid distributor header 405, scrubber stage three ammonia supply 310, scrubber stage four ammonia supply 410, scrubber stage three pump 330, scrubber stage four pump 430, scrubber stage three separator 370, scrubber stage four separator 470, scrubber stage three liquor removal line 320, **scrubber stage three liquor supply 350**, scrubber stage four liquor removal line 420, scrubber stage three tank 380, scrubber stage four tank 480, scrubber stage three water supply 340, scrubber stage four water supply 440, scrubber stage three packing 360, and scrubber stage four packing 460.

2. Please replace paragraph [0042] with the following amended paragraph:

[0042] In one embodiment shown in Fig. 2, thiosulfate plant 500 is composed of a fluidized bed reactor 505 in which the liquid ammonia liquor flows upward through a bed of solid sulfur. It is important that the temperature of the fluidized bed in reactor ~~[[500]]~~ **505** not exceed 243°F, as the sulfur bed will melt, resulting in reactor shutdown. It is preferred to keep the temperature of the sulfur bed below 200°F.

3. Please replace paragraph [0049] with the following amended paragraph:

[0049] In another embodiment shown in Fig. 3, thiosulfate plant or facility 500 is composed of four individual reactors, reactors 700a – 700d. In the embodiment depicted in Fig. 3, all of the reactors are essentially identical, although this is not a requirement of the present invention. Reactors 700a – 700d are fluidized bed reactors that are constructed similarly and operate essentially identically to fluidized bed reactor 505.

4. Please replace paragraph [0052] with the following amended paragraph:

[0052] Reactors 700a – 700d progressively convert the bisulfite and sulfite present in thiosulfate supply line ~~[[260]]~~ into thiosulfate. It is preferable to limit the concentration of bisulfite and sulfite in reactor discharge line 730d to less than 1 wt%, more preferably less than 0.1 wt%. While Fig. 3 depicts four fluidized bed reactors in series, it is possible to use more or fewer reactors, depending on the degree of conversion desired and the efficiency of conversion in each reactor.

5. Please replace paragraph [0053] with the following amended paragraph:

[0053] The discharge from the final reactor in the series, 700d in Fig. ~~[[2]]~~ 3, may contain some small amount of solid contaminants such as fly ash. These solids may be filtered from the discharge liquid. Further, the concentration of thiosulfate leaving the last reactor in the sequence, shown as 700d in Fig. ~~[[2]]~~ 3, may not be of commercial grade thiosulfate quality, *i.e.* typically 55% or higher dissolved solids and commonly referred to as 12-0-0-26 or better (nitrogen, phosphorous, potassium, and sulfur). This concentration may be enriched by removing some of the water present in the discharge liquid, as previously discussed related to Fig. 2.

### **DRAWING AMENDMENTS**

#### **IN THE DRAWINGS:**

Please replace Drawing Sheet 3, which includes Figure 3, with the replacement sheet attached hereto. This sheet replaces the original sheet including Figure 3. In Figure 3, previously omitted reference numbers 760a, 770a and 780a have been added. The amendments are shown on the "Annotated Sheet Showing Changes" with red-lined changes.

Attachment: Replacement Sheet  
Annotated Sheet Showing Changes